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SITE ASSESSMENT WORK PLAN
FOR
DOWNER'S GROVE GROUNDWATER INVESTIGATION
DOWNERS GROVE, ILLINOIS

January 2002

Prepared for

U.S. Environmental Protection Agency
Emergency and Remedial Response Branch
Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

SITE ASSESSMENT WORK PLAN
FOR
DOWNER'S GROVE GROUNDWATER INVESTIGATION
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INTRODUCTION

1.1 PURPOSE AND ORGANIZATION

1.1.1 Purpose

On 7 January 2002, U.S. Environmental Protection Agency (U.S. EPA) Region V On-Scene Coordinator (OSC) Mr. Steve Faryan under TDD No. 0111-010 directed the Roy F. Weston, Inc. (WESTON®) Superfund Technical Assessment and Response Team (START) to develop a Site Assessment Work Plan prior to initiating a Site Assessment for the Downers Grove Groundwater Investigation in Downers Grove, Illinois. The purpose of this Work Plan is to define the file review, geologic investigation, and sampling activities to be performed in order to provide more accurate data to evaluate the source and potentially responsible parties (PRPs) for the chlorinated solvent groundwater contamination in the Downers Grove area.

1.1.2 File Review, Geologic Investigation and, Sample Collection Objectives

The objective of the file review is to collect additional information on the facilities that are currently operating or have previously had operations within the Ellsworth Industrial Park and have had a history of using chlorinated solvents. This information, in combination with the geologic investigation and sample collection activities will aid U.S. EPA in identifying the source of the chlorinated solvent contamination in Downers Grove, Illinois.

1.1.3 Work Plan Organization

This Site Assessment Work Plan is divided into five sections including the following:

Section 1 – The remainder of this section presents an overview of the site background and history.

Section 2 – The scope of services section presents the planned project activities and provides the rationale and the sample collection procedures that will be performed through the implementation of the Site Assessment Work Plan.

Section 3 – The project team organization documents the responsibility and authority of the organizations and key personnel involved with the implementation of the Site Assessment Work Plan and provides a description of the key personnel directing the Site Assessment.

Section 4 – The project schedule provides a schedule for Site Assessment activities.

1.2 SITE BACKGROUND

1.2.1 Site Background/History

On 11 October 2001, U.S. EPA received a request from the Illinois Environmental Protection Agency (IEPA) to assign the appropriate personnel to conduct a time critical removal assessment and possible removal action at the Downers Grove Groundwater Investigation site located in unincorporated Downers Grove, DuPage County, Illinois.

Between the spring and fall 2001, IEPA performed a groundwater investigation just east of I-355 near Downers Grove. The investigation was in response to citizen concerns related to recent private well sampling in neighboring Lisle. The investigation consisted of three rounds of groundwater sampling throughout the area. Approximately 495 private wells were sampled and analyzed for levels of volatile organic chemicals (VOCs). Sample results indicated elevated levels of tetrachlorethylene (PCE), trichloroethylene (TCE), and other related VOCs. Approximately 52% of samples collected during Round 1 and Round 2 contained PCE or TCE above 5 parts per billion (ppb) (the federal drinking water standards and the State of Illinois Maximum Contamination Limit [MCL]), and approximately 7% of the samples collected during Round 3 contained PCE or TCE

levels above 5 ppb.

In October 2001, Parsons Engineering Science, Inc. (Parsons) performed a Cone Penetration Test (CPT) investigation within the Ellsworth Industrial Park for IEPA. The investigation used a CPT rig to log the shallow lithology in the area and collect groundwater samples at a variety of depths above the bedrock in order to identify the source(s) of the chlorinated solvent releases. The area of investigation included only the southern and southeastern-most portions of the industrial park along portions of Wisconsin, Elmore, and Inverness Avenues. During the investigation, Parsons was able to collect three groundwater samples from two boring locations using the CPT sampler. Difficulties were encountered due to low groundwater inflow rates, which the tight clay soil found in the area of investigation likely caused. In the areas where the CPT sampler could not be used, Parsons installed temporary 3/4 inch polyvinyl chloride (PVC) piezometers. The piezometers were screened over intervals ranging from approximately 20 to 35 feet. Twenty-eight groundwater samples were collected from 27 separate sampling locations within the industrial park. Of the 28 groundwater samples, only one sample (CPT-07, from 74.7 - 72.9 feet below ground surface) contained TCE above the method detection limit.

1.2.2 Initial Site Assessment Area

The Site Assessment will focus on the Ellsworth Industrial Park and selected areas east of the industrial park which are located in Downers Grove, Illinois.

SECTION 2

2.1 PROJECT PLANNING

Project planning activities include effort related to the following activities:

- Meetings;
- File Reviews;
- Site Assessment Work Plan.

2.1.1 Meetings

In December 2001, U.S. EPA OSC Steve Faryan and Ben Maradkel (START) had a meeting with IEPA in Springfield, Illinois, to collect facility responses from IEPAs facility questionnaire and gather additional information on facilities identified as using chlorinated solvents in the Ellsworth Industrial Park.

On 7 January 2002, U.S. EPA and START met to discuss the initial file review START performed from the information obtained at IEPA as well as from the U.S. EPA Records Center. The scope of the Site Assessment Work Plan was also discussed during this meeting. The following personnel took part in the meeting:

- Steve Faryan, OSC;
- Omprakash Patel, START;
- Kurt Fischer, START;
- Ben Maradkel, START;
- Heidi Gorrill, START;

On 22 January 2002, Kurt Fischer (START) and Jim Salch (IEPA) met in Springfield, Illinois to review previous geological and groundwater investigation results and develop a scope of work for the site assessment using multiple investigation technologies to be implemented using both U.S. EPA and IEPA resources in a joint field effort.

2.1.2 Evaluate Existing Information

In October 2001, IEPA sent out information request letters to approximately 21 facilities that had been identified as using chlorinated cleaners/solvents or other types of chlorinated materials during their initial door-to-door survey of the Ellsworth Industrial Park in Downers Grove, IL. The information IEPA requested pertained to the site activities related to the purchasing, receiving, processing, storing, treating, disposing, or otherwise handling hazardous substances. In December 2001, OSC Faryan and START went to Springfield to copy facility responses to the information request letters and obtain additional information from the State files regarding the facilities IEPA identified. This information along with available records from the U.S. EPA Records Center was reviewed by START in order to develop a summary table of each facility in the industrial park identified as using chlorinated solvents facilities. Based on the available information, each facility was then ranked according to its potential to be the source of contamination in the Downer's Grove area. START identified approximately 12 facilities as having a high potential for contributing to the sources of the PCE/TCE contamination. These facilities are discussed briefly in the following sections (see also Figure 2-1). There were several facilities in which no or limited information was available to review. Therefore, there may be additional facilities that are identified as potential sources of PCE/TCE contamination upon receipt of additional information.

2.1.2.1 Ames Supply Company

Ames Supply Company was a wholesale distributor to the office machine dealer industry and is centrally located within the industrial park on Curtiss Street. Ames is a large quantity generator of hazardous waste and was the sole tenant of this piece of property from 1970 to 2000. The information IEPA obtained indicated that the following chemicals were used or handled at the facility: 1,1,1-trichloroethane, 1,1,2-trichlorotrifluoroethane; methylene chloride; trichloroehtylene (TCE); chlorodifluoro methane; and 1,1,2,2-tetrachloroethane. Previous investigations at the facility include a Phase I Environmental Site Assessment (ESA) performed in January 2000 and a Phase II

Subsurface Investigation performed in July 2001 with an expanded Phase II scope performed in September 2001. These investigations revealed that heavy staining was present on the floor of the facility and remnants of what was believed to be chlorinated solvent was observed within the expansion joints located in the manufacturing/warehouse area. Soil borings from the Phase II investigation indicated the presence of 1,1,2,2-tetrachloroethane, tetrachloroethane (PCE) and TCE.

2.1.2.2 Arrow Gear Company

Arrow Gear Company is an aircraft gear manufacturing company and is located towards the eastern central portion of the industrial park on Curtiss Street. Arrow is the owner of this property and has been at this location for 37 years. The information IEPA obtained indicated that the facility used TCE and generated both F001 (spent halogenated solvents used in degreasing) and F009 (spent stripping and cleaning bath solutions from electroplating operations where cyanides are used) wastes. Previous investigations at the facility include a Phase I ESA performed in 1996. The Phase I identified a TCE spill/leak from a drum that was delivered to the facility and elevated levels of TCE from a well adjacent to the property. The investigation also identified drainage pipes from the facility that run into St. Joseph Creek.

2.1.2.3 Dyna Gear, Incorporated

Dyna Gear, Incorporated, is an after market and original manufacturer of automotive equipment and is located towards the northern central portion of the industrial park on Curtiss Street. Dyna Gear is the owner of this property and has been at this location for approximately five years. The information IEPA obtained indicated that the facility generated approximately 1,059 gallons of F001 waste in 1989. Previous investigations at the facility include a Phase I ESA performed in November 2001. The Phase I indicated that a witness saw a container of cutting oil dripping and being dumped into the creek by an individual on the Dyna Gear property.

2.1.2.4 Econo-Temp, Incorporated

Econo-Temp Incorporated is a heating and air conditioning parts and service center located in the southeast corner of the industrial park on Belmont Road. The information IEPA obtained indicated that the facility has used freon to recharge air conditioners and has operated at this location for approximately 10 years. During the door-to-door survey IEPA conducted, the following information was obtained regarding this property:

1. Liberty Wire (2333 Wisconsin Street) operated on the property during the 1960s - 1980s coating wires and possibly using vinyl chloride. The company had two USTs removed with contamination.

2. Foote Jones Company (500 block of Rodgers in Downers Grove) handled TCE and had a history of disposing of chemicals and drums in the creek.

3. Highview subdivision located at Maple/Belmont had a problem with TCE in a municipal well in about 1992.

2.1.2.5 Flexco Flexible Steel Lacing Company

Flexco Flexible Steel Lacing Company is a manufacturer of conveyor belt fasteners and belt products located towards the southern central portion of the industrial park on Wisconsin Street. Flexco is a large quantity generator of hazardous waste and has been at this location for over 30 years. The information IEPA obtained indicated that the facility used TCE until approximately 1990.

2.1.2.6 Magnatrol International, Incorporated

Magnatrol is a manufacturing facility that purchases paints, solvents, and chemicals to be used in the manufacture of level and flow controls located in the southeastern corner of the industrial park on Belmont Road. Magnatrol is a large quantity generator and has occupied the property for approximately 24 years. The information IEPA obtained indicated that the facility used TCE and

generated F001 waste. Previous investigations at the facility include a Phase I ESA performed in 1998. The Phase I identified an oil-saturated absorbent on the floor in the hazardous material storage room. A TCE degreaser, which had a 500-gallon above ground TCE storage tank associated with it, was formerly used on-site A floor drain in the basin of the shipping/receiving docks empties to the storm sewer, and stormwater runoff is north towards St. Joseph Creek.

2.1.2.7 Molex Incorporated

Molex, Inc., is a manufacturer of electric and electronic connectors, which involve metal plating and injection molding operations. The company has two locations within the industrial park in the northwestern portion of the industrial park, one on Walnut Avenue and the second on Katrine Avenue. The Walnut Avenue facility is a large quantity generator and has occupied the property for approximately 12 years. The information IEPA obtained indicated that this site used TCE and generated F001 waste. Historical searches of this location and the door-to-door survey by IEPA indicated that a 2,500-gallon UST containing mineral spirits was pulled approximately 3 years ago. The soil surrounding the tank was found to be contaminated and was remediated and tested for cleanup verification. IEPA's door-to-door survey indicated that chlorinated solvents were not used at the Katrine site and that Molex has occupied this piece of property for approximately 37 years.

2.1.2.8 Morey Corporation

Morey Corporation is a manufacturer of small electrical components and printed circuit boards located in the southwestern portion of the industrial park on Wisconsin Street. Facility operations involved the storage of miscellaneous liquid wastes in a small dedicated room along the eastern wall of the property. The waste primarily consisted of cleaning solvent and soldering byproducts. Morey operated at this location for approximately 30 years until moving to the Bollingbrook area in 2001. The property was sold in January 2001 and is currently vacant. The information IEPA obtained indicated that the following chemicals were used or handled at the facility: TCE, PCE; methylene

chloride; vinyl chloride; cis 1,2-dichloroethene (DCE); trans 1,2-DCE; 1,1-DCE; 1,3-dichlorobenzene; and 1,4-dichlorobenzene. Previous investigations at the facility include a Phase I performed in May 2000 and a Phase II Subsurface Investigation performed in May 2000 with an expanded scope performed in June 2001. A Focused Site Investigation was performed from November 2000 to January 2001. The Phase I indicated two areas of potential concern: the clay potting/compound mixing area inside of the building contains evidence of spilled materials and structural degradation of the underlying concrete floor and an area exterior to the building in which a drain leading from the chemical and waste storage area exits through the wall with evidence of stressed vegetation, indicating previous chemical spills. The Phase II Investigations indicated elevated levels of PCE (220 parts per million [ppm]), TCE (5.96 ppm), vinyl chloride (0.116 ppm), 1,3-dichlorobenzene (2.72 ppm), 1,4-dichlorobenzene (2.67 ppm), cis 1,2-DCE (8.74 ppm), trans 1,2-DCE (0.118 ppm) and methylene chloride (0.0124 ppm) in soil borings taken near the unloading dock area where the drain is located. During the Focused Site Investigation, an additional 17 soil borings were collected and indicated elevated levels of PCE (110 ppm), TCE (8 ppm), vinyl chloride (0.46 ppm), cis 1,2-DCE (3.3 ppm), trans 1,2-DCE (0.91 ppm), 1,1-DCE (0.18 ppm), and methylene chloride (0.40 ppm). Morey entered into the Illinois State Voluntary Site Remediation Program (SRP) and cleaned up a 1,200 square foot area along the east-central portion of the property. In January 2001, the facility received a No Further Remediation (NFR) letter from IEPA.

2.1.2.9 Rexnord Corporation

Rexnord Corporation is a manufacturer of composite bearings. The company has two locations within the northeast corner of the industrial park off of Curtiss Street. The facility, located at 2324 Curtiss Street has occupied this property for over 20 years and indicated using methylene chloride prior to 1990 during the IEPA door-to-door survey. The 2400 Curtiss Street facility is a large quantity generator and has occupied the property for over 40 years. The information IEPA obtained indicated that this site formerly used PCE (until the 1980's) and generated F001 waste.

2.1.2.10 Scot, Incorporated

Scot, Inc., operates an engineering/manufacturing facility that produces propellant and explosive actuated devices for military aircraft, missiles, and space vehicles. The facility has operated at this location for approximately 43 years and is located in the central portion of the industrial park on Curtiss Street. The information IEPA obtained indicated that the facility formerly used TCE and generated F001 waste. Previous investigations at the facility include a Phase I ESA and a Phase II Subsurface Investigation. The Phase I indicated stained asphalt outside of the south side of the building and a storage from with a patched drain in the center of the floor that leads out to the west side of the building where it discharges directly onto the surface soil. Soil samples collected during the Phase II investigation detected PCE at 238 ppb.

2.1.2.11 Suburban Self Storage

Suburban Self Storage is a self-storage facility located in the southern central portion of the industrial park. Liberty Copper and Wire Company previously occupied the property from 1960 to 1986. Review of information from the U.S. EPA CERCLA Records Center indicated that the facility used toluene, xylene, cresylic acid, and methanol and disposed of F003 wastes. The files in the Records Center indicated that a site investigation has previously been performed at the facility. Soils were found to be contaminated with xylene (57,100 ppm) and were subsequently remediated. At this point, there is no further remedial action planned. Review of historical information provided by Environmental Data Resources, Inc. (EDR) indicated that three 4,000-gallon USTs and one 5,000-gallon UST containing hazardous substances have been closed.

2.1.2.12 Tricon Industries, Incorporated

Tricon Industries, Inc., is a manufacturer of injection molded components and utilizes metal stamping, plating, and finishing operations. The company has two locations within the industrial

park in the northeast corner off of Chase Street and in the southeast corner off of Wisconsin Street. The facility located at 5000 Chase Street was previously located at 2211 Curtiss Street. The information IEPA obtained indicated that the Chase Street site is a large quantity generator using approximately 1,400 pounds of PCE every two months. The Wisconsin Street site was reported as using PCE and 1,1,1-trichloroethane.

2.1.3 Site Assessment (SA) Work Plan

START will prepare and submit a SA Work Plan in accordance with discussions with U.S. EPA and IEPA.

2.1.3.1 Develop SA Work Plan

START will prepare a work plan to address the SA activities. The SA Work Plan will include site-specific background information, site-specific project plans, appropriate U.S. EPA guidance, and technical direction the U.S. EPA OSC provides.

The Work Plan includes the following:

- Identification of SA elements and associated tasking - This includes reviewing site documentation, previous field sampling, and analysis activities. Output of this task will be a detailed work breakdown structure of the SA project.
- Technical Approach - The technical approach includes a description of each task; the technical approach for performing each task and assumptions used; any information to be produced during and at the conclusion of each task; and a description of the deliverables to be produced.
- Schedule - The schedule includes dates for completion of each required task, and major submittals identified in various tasks, and their due dates. The schedule also includes information regarding timing, initiation, and completion of critical path milestones.

- Project Staff - The project staff section includes the proposed personnel that will complete the activities defined for each task based on their qualifications and experience.

2.1.3.2 Revised SA Work Plan (if necessary)

START will revise the Work Plan to incorporate U.S. EPA's comments into the final Work Plan.

- Prepare and Submit Revised SA Work Plan - A revised RA Work Plan will be prepared and submitted to incorporate made during U.S. EPA's review.

2.2 PREPARATION OF SITE-SPECIFIC PLANS

Site-specific planning documents developed for previous field investigation activities include the following:

- Health and Safety Plan;
- Sampling and Analysis Plan

2.2.1 Health and Safety Plan

In accordance with Occupational Health and Safety Administration (OSHA) guidelines and WESTON corporate health and safety policy, a site-specific health and safety plan (HASP) is required for all field tasks. The HASP specifies employee training, protective equipment, medical surveillance requirements, standard operating procedures, and a contingency plan in accordance with 29 CFR 1910.120.

2.2.2 Sampling and Analysis Plan

A Sampling and Analysis Plan (SAP) will be prepared to address the SA field investigation activities. The SAP will define the sampling and data collection methods that will be used for the project. The SAP will include sampling objectives; sampling locations and frequency; and a breakdown of the samples that the laboratory will analyze. The SAP will consider the use of all existing data and will justify the need for additional data whenever existing data will meet the same objective.

2.3 FACILITY REVIEWS

In order to obtain additional information, U.S. EPA will send a 104E questionnaire to each of the facilities identified as using chlorinated solvents within the Industrial Park. Upon receipt of the additional facility information, START will review the documents each facility provides and update the facility summary table in order to identify additional potential sources of contamination and rerank the facilities accordingly.

Upon determining the potential responsible parties, START may accompany U.S. EPA representatives in visiting each of the facilities in order to interview facility employees, visually inspect each site, and document the facility's potential to release hazardous substances into the environment.

2.4 FIELD INVESTIGATION

A field investigation will be performed in order to gain a more representative picture of the stratigraphy and shallow groundwater depths throughout the Ellsworth Industrial Park and surrounding areas. Groundwater samples will be collected and analyzed for VOCs during the field investigation in order to further delineate the chlorinated solvent plume within the overburden and

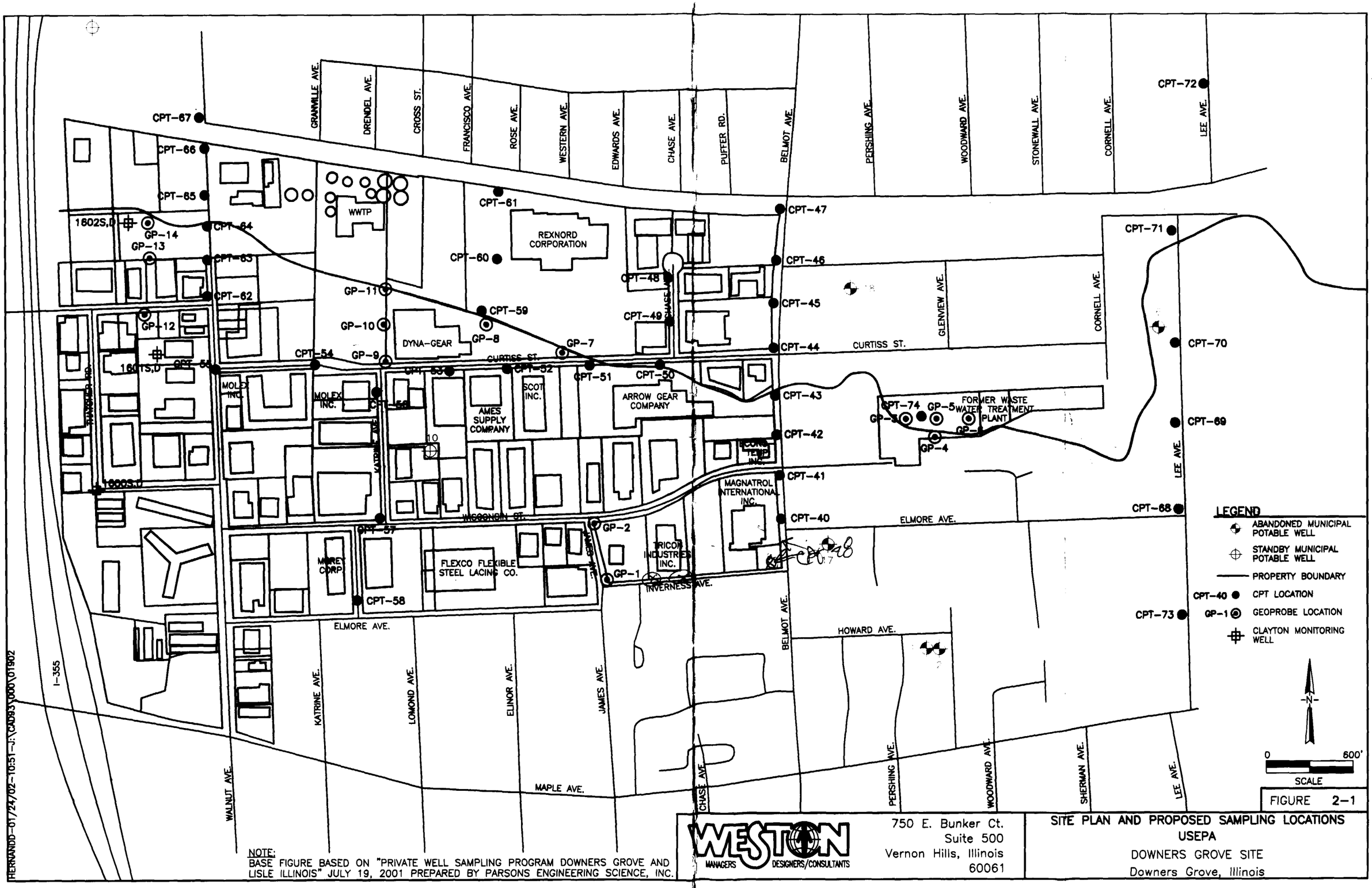
to assist U.S. EPA in determining the source of the contamination. The placement of soil borings and groundwater sampling locations are presented in Figure 2-1 and the rationale for each placement is presented in Table 2-1. The geological investigation and groundwater sampling will be performed by one of two methods: Cone Penetration Testing or Geoprobe. Each of these methods is discussed in detail below.

2.4.1 Cone Penetration Testing and Groundwater Sampling

START is proposing to use the Cone Penetration Testing (CPT) technology to advance additional borings throughout the industrial park and selected areas east of the park. The CPT rig will be used to advance stratigraphy borings, which will define the geology at each location as well as identify the presence of water bearing zones, through the unconsolidated overburden formations. Each CPT boring will be advanced to the bedrock surface (estimated at 70 to 90 feet bgs) or refusal. Once water bearing zones are identified, depth intervals will be selected for groundwater sampling. In order to collect shallow groundwater samples, the CPT unit will advance a water sampling tool to the predetermined depth interval. The groundwater samples will be collected using one of the following pumps, in order of preference: peristaltic pump, an inertial pump, or a bailer. It is assumed that up to two groundwater samples will be collected from each of the stratigraphy borings. Actual sample numbers will vary and depend upon the stratigraphy at each location. In the event that the CPT rig is unable to collect the required groundwater samples using either of the methods described above due to low permeability conditions, temporary piezometers will be installed at the stratigraphy boring location and the samples will be collected accordingly. To monitor for the potential presence of soil gas vapors, a photo- or flame-ionization detector (PID/FID) will be used to collect readings just below the borehole surface after retraction of CPT tools and prior to borehole grouting.

2.4.2 Geoprobe

In areas that are inaccessible by the CPT rig, IEPA will use a geoprobe to perform the geologic



NOTE:
BASE FIGURE BASED ON "PRIVATE WELL SAMPLING PROGRAM DOWNERS GROVE AND LISLE ILLINOIS" JULY 19, 2001 PREPARED BY PARSONS ENGINEERING SCIENCE, INC.

FIGURE 2-1

SITE PLAN AND PROPOSED SAMPLING LOCATIONS
USEPA
DOWNERS GROVE SITE
Downers Grove, Illinois

WESTON MANAGERS DESIGNERS/CONSULTANTS
750 E. Bunker Ct.
Suite 500
Vernon Hills, Illinois
60061

Table 2-1

CPT Boring Location Rationale

Boring Location	Rationale
CPT-40 CPT-41 CPT-42 CPT-43 CPT-44 CPT-45 CPT-46 CPT-47	Gather information from along the eastern boundary of the Ellsworth Industrial Park. CPT-40 through 43 will further evaluate the area adjacent to Magnatrol and Econo-Temp sites and is downgradient of Arrow Gear property. CPT-44 through 47 will provide cross sectional geologic information relative to suspected outwash deposits along the creek and are between the industrial park and previously impacted municipal wells to the east.
CPT-48 CPT-49 CPT-50 CPT-51	These borings are situated southeast of the Rexnord Corporation.
CPT-52	Proximity to the Ames Supply Company and Scot,Inc.
CPT-53	This boring is located southeast of Dyna Gear.
CPT-54 CPT-55 CPT-56	Proximity to Molex properties.
CPT-57	Downgradient of Molex properties and will provide cross-sectional geologic information near center of industrial park.
CPT-58	Proximity to the Morey Corporation.
CPT-59	Proximity to Dyna Gear and St. Joseph Creek and downgradient of Rexnord.
CPT-60 CPT-61	Located between current WWTP and Rexnord.

Table 2-1 (continued)

CPT Boring Location Rationale

Boring Location	Rationale
CPT-62 CPT-63 CPT-64 CPT-65 CPT-66 CPT-67	Gather information from along the northwestern corner of the Ellsworth Industrial Park and provide cross-sectional geologic information relative to suspected outwash deposits along the creek.
CPT-68 CPT-69 CPT-70 CPT-71 CPT-72 CPT-73	Gather information from along Lee Avenue, which is located to the east of the industrial park in areas where former municipal wells have indicated the presence of chlorinated solvent contamination.
CPT-74	Proximity to the former Wastewater Treatment Plant.

investigation and collect groundwater samples. In addition, the geoprobe rig will be outfitted with a Membrane Interface Probe (MIP), which is capable of monitoring and detecting the presence of total volatile organics as the probe is advanced through the subsurface. This will allow a determination of the presence and relative depth of any gross VOC contamination encountered. At locations where the Geoprobe is to be used, it is assumed that one groundwater sample will be collected per boring. Groundwater samples IEPA collects using the Geoprobe will be transferred to START to be analyzed for VOCs by the START procured laboratory. All Geoprobe boring and sampling activities will be under the direction of IEPA personnel.

2.5 ANALYTICAL PARAMETERS

It is estimated that START and IEPA will collect approximately 60 to 80 shallow groundwater samples during field activities to determine the source of chlorinated solvent contamination within the Ellsworth Industrial Park. The samples will be collected from each location where the CPT or Geoprobe is used. Samples will be analyzed for VOCs only using U.S. EPA SW-846 Method 8260. Detection limits of 1 ppb have been specified for all chlorinated solvents. START has requested a standard turn around time of 14 days from the laboratory.

2.6 FIELD QUALITY CONTROL SAMPLES

Field duplicates and equipment blank samples will be collected at a frequency of one per 10 project samples per parameter. Trip blanks will also be collected at a frequency of one per sample cooler shipment of aqueous VOC samples.

2.7 ANALYTICAL LABORATORY PROCEDURES

Samples collected for VOC analyses will be analyzed by the analytical laboratory, which will follow the methods specified in SW-846-8260. Detection limits of 1ppb for all chlorinated solvents and

their breakdown products has been specified.

2.8 DATA VALIDATION/MANAGEMENT

All laboratory analytical data will be validated by a WESTON Data Validator. The following guidelines for data validation will be utilized:

- Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses– U.S. EPA, October 1999.

2.9 SAMPLE PACKAGING, STORAGE, AND SHIPMENT

Sample containers will be labeled and shipped with a sample tag affixed to each container. Samples will be placed in plastic zipping bags. Bagged containers will be placed in appropriate transport containers, and the containers will be packed with appropriate absorbent material, such as vermiculite, and preserved with ice to 4° Celsius. All sample documents (e.g. chain of custody) will be affixed to the underside of each transport container lid. The lid will be sealed with shipping tape, and custody seals will be affixed to the transport container. Transport containers will be labeled with the origin and destination locations.

Regulations for packaging, marking, labeling, and shipping of hazardous materials and wastes are promulgated by the U.S. Department of Transportation (DOT). Air carriers that transport hazardous materials require compliance with the current International Air Transport Association (IATA) Regulations, which apply to the shipment and transport of hazardous materials by air carrier. START will follow IATA regulations to ensure compliance.

2.10 SITE HEALTH AND SAFETY

The Site Health and Safety Plan will meet the Occupational Safety and Health Administration

(OSHA) requirements of 29 CFR 1910.120. The HASP will be read and signed by each individual from START, WESTON's subcontractors, and all other personnel who will be on-site. Also, START will work with JULIE to have all underground utilities surrounding the borings to be advanced by the CPT contractor located prior to the start of the scheduled field work. Marking of underground utilities at Geoprobe locations will be the responsibility of IEPA personnel since Geoprobe activities will not be under the direct control of START.

Elements required by 29 CFR 1910.120 are outlined in the HASP. These elements concern the regulatory status of the site; hazard assessment and equipment selection; source/location of contaminants and hazardous substances; chemical, biological, radiation, and physical hazards of concern; medical surveillance; site hazard monitoring, program; and personal protective equipment (PPE) for employee protection, monitoring and decontamination. In accordance with WESTON's PPE program and 29 CFR 1910.132, the Site Health and Safety Coordinator (SHSC) and/or the Site Manager have evaluated conditions and verified that the PPE selection, outlined in the HASP is appropriate for the hazards known or expected to exist.

2.11 SITE CONTROL MEASURES

Site control measures include a description of the contamination zone, safe zone boundary, and other requirements of 29 CFR 1910.120. Contamination zone and safe zone boundaries are yet to be determined for each of the boring locations and will be delineated prior to conducting sampling activities.

Personnel and equipment decontamination will be conducted in accordance with START's HASP and SOPs as part of the Sampling and Analysis Plan. Decontamination is performed as a quality assurance measure and a safety precaution. It prevents cross contamination among samples and helps maintain a clean working environment for the safety of all field personnel. All used PPE materials will be properly contained, bagged, labeled, and left on-site to be disposed of at the discretion of the

U.S. EPA.

2.12 SITE PREPARATION

Prior to advancing any borings using the CPT rig, START will work with JULIE to identify any overhead and underground utilities near the such as the following:

1. Electrical lines and appliances
2. Gas lines
3. Pipelines
4. Steam lines
5. Water lines
6. Sewer lines
7. Pressurized air lines
8. Cable Television lines
9. Telephone lines

WESTON's SOP Number FLD 34-Utilities is part of the Site-Specific Sampling Plan and/or HASP. Approximately one week prior to the site assessment, START will work with representatives of the U.S. EPA to flag all of the boring locations and locate them using a GPS unit provided by U.S. EPA.

Marking of underground utilities at Geoprobe locations will be the responsibility of IEPA personnel since Geoprobe activities will not be under contract to or under the direct control of START.

2.13 SITE ASSESSMENT REPORT

START will prepare a Site Assessment Report that accurately establishes the site characteristics such as media contaminated, extent of contamination, and the results of the geologic investigation. START will initially prepare a draft Site Assessment Report, which includes the following:

- Site Background - START will assemble and review available facts about the

regional conditions and conditions specific to the site.

- Investigation
  - Field Investigation and Technical Approach
  - Chemical Analysis and Analytical Methods
  - Field Methodologies
- Site Characteristics
- Discussion of Investigation Results
- Summary and Conclusions

After the U. S. EPA reviews the draft SA Report, START will incorporate U. S. EPA comments and submit the final SA Report.

SECTION 3

PROJECT TEAM ORGANIZATION

Operational responsibilities involving execution and direct management of the technical and administrative aspects of this project have been assigned as follows:

U.S. EPA On-Scene Coordinator– Mr. Steve Faryan is the U.S. EPA OSC for this project.

START Program Manager—Mr. Dean Geers is the START Program Manager. The Program Manager has overall responsibility for the work assignment. The Program Manager is responsible for ensuring that the project meets all U.S. EPA objectives and quality standards. He is also responsible for ensuring that all work is executed in accordance with the U.S. EPA's technical directives. The START Program Manager is responsible for assigning and monitoring the functions and responsibilities of the START Project Manager. In addition, he will commit the necessary resources and personnel to meet the objectives of this removal assessment.

START Project Manager—Mr. Omprakash Patel is the Project Manager. The Project Manager is responsible for implementing the project objectives using the personnel assigned. The Project Manager's primary function is to ensure that the technical, financial, and scheduling objectives are achieved successfully. The START Project Manager will coordinate with the START Program Manager and Quality Assurance Manager and will be the major point of contact and control for matters concerning the project. His other responsibilities include the following:

- Coordination and management of project personnel;
- Project scheduling;
- Coordination and review of required deliverables;
- General quality assurance of field activities;
- Represent the project team at meetings and public hearings;
- Exercise overall responsibility for all audits under the START contract.

START Technical Lead - Mr. Kurt Fischer will serve as the START Technical Leader and will be responsible for ensuring that the technologies selected for the geologic investigation and groundwater sampling are appropriate for the site conditions. Mr. Fischer will also be responsible for ensuring that boring locations are appropriate based on previous studies and facility-specific information U.S. EPA obtains. The Technical Lead will also provide the initial technical review of all deliverables and data collection activities

START Project Leader/Field Team Leader– Mr. Ben Maradkel will serve as the START Project Leader/Field Team Leader and will be responsible for the daily direction of the team members regarding the TDD-specific tasks. The START Project Leader/Field Team Leader will also coordinate site activities with IEPA. In essence, this person will be responsible for the management of the field team and the supervision of all field activities.

START Site Health and Safety Coordinator (SHSC)– Mr. Ben Maradkel will also serve as the individual responsible for implementing the Health and Safety Plan. The SHSC will perform health and safety monitoring and ensure compliance with all health and safety requirements.

START Field Geologist - START will identify an individual to serve as the field geologist for this site assessment. This individual will be responsible for overseeing the CPT contractor and ensuring that geologic information obtained during the investigation is accurate.

SECTION 4

PROJECT SCHEDULE

4.1 SCHEDULE

Table 4-1 provides the tentative schedule for site assessment activities.

Table 4-1

Schedule of Site Assessment Activities

Date	Task
25 January 2002	Submit Draft SA Work Plan to U.S. EPA for review.
28 January - 1 February 2002	Incorporate U.S. EPA comments and finalize SA Work Plan.
30 January 2002	Submit Sampling and Analysis Plan.
4 February - 8 February 2002	Mobilization. Stake out boring locations and identify utilities; secure property access
11 February - 22 February 2002	Perform Site Assessment field activities (U.S. EPA & IEPA).
Approximately 3 weeks after receipt of laboratory data	Submit Draft Site Assessment Report.